Memorandum

MIAMI-DADE COUNTY

Date: November 4, 2010

To: Honorable Dennis C. Moss, Chairman
and Members, Board of County Commissioners

Agenda Item No. 18(A)(3)

From: George M. Burgess
County Manager

Subject: Resolution Ratifying the County Mayor's Action of Executing Agreement Number 4600002160 with the South Florida Water Management District for Ecological Monitoring for the L-31E Culvert Project in the Biscayne Bay Coastal Wetlands

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Recommendation
It is recommended that the Board approve the attached resolution ratifying the execution of Agreement Number 4600002160 with the South Florida Water Management District (SFWMD). This agreement will provide the County with $26,997.39 over a fifteen (15) month period for surface water quality and vegetation monitoring activities along the L-31E Canal as part of the Biscayne Bay Coastal Wetlands (BBCW) Program. No matching funds are required by the County.

Scope
This agreement encompasses parts of Commission District 9.

Fiscal Impact/Funding Source
This agreement provides Miami-Dade County with $7,509.39 in FY09-10 and $19,488 in FY10-11 to perform duties specified in the agreement. No matching funds are required by the County.

Track Record/Monitor
The Director of the Department of Environmental Resources Management will monitor this contract.

Background
The L-31E culverts are an early work project element of the Biscayne Bay Coastal Wetlands (BBCW) – Phase I, a component of the Comprehensive Everglades Restoration Plan (CERP). This project is intended to help improve distribution of freshwater to Biscayne Bay and Biscayne National Park (BNP), improve freshwater and estuarine habitat, improve salinity distribution within Biscayne Bay and re-establish productive nursery habitat along the bay shoreline. Agreement Number 4600002160 will allow Miami-Dade County to perform the required surface water quality and vegetation monitoring for the L-31E Culvert Project.

The specified duties will be performed in southeastern Miami-Dade County, east of the Homestead Air Reserve Base along SW 97th Avenue between SW 268th and SW 320th Street.

Due to the need for baseline sampling of the newly-installed culverts during the 2010 summer wet season, this agreement was executed during the August 2010 ratification period and is submitted for ratification.

Assistant County Manager

MEMORANDUM
(Revised)

TO: Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners

DATE: November 4, 2010

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 18(A)(3)

Please note any items checked.

_____ **"3-Day Rule" for committees applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **No committee review**

_____ **Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve**

_____ **Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved_____ Mayor

Veto _____

Override _____

Agenda Item No. 18(A)(3)
11-4-10

RESOLUTION NO. _____

RESOLUTION RATIFYING THE COUNTY MAYOR'S OR MAYOR'S DESIGNEE'S ACTION OF EXECUTING AGREEMENT NUMBER 4600002160 WITH THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT FOR ECOLOGICAL MONITORING FOR THE L-31E CULVERT PROJECT AS PART OF THE BISCAYNE BAY COASTAL WETLANDS PROJECT; AND AUTHORIZING THE COUNTY MAYOR OR MAYOR'S DESIGNEE TO EXERCISE ANY AND ALL OTHER RIGHTS CONTAINED THEREIN

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference; and

WHEREAS, this Board has adopted Resolution No. R-784-10, authorizing the County Mayor or Mayor's designee to administer County business during the Board of County Commissioners' 2010 summer recess as provided therein, and has directed that all actions taken pursuant to such authority be submitted to this Board for ratification at its October 5, 2010 meeting,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board ratifies the County Mayor's or Mayor's designee's action of executing Agreement Number 4600002160 with the South Florida Water Management District for Ecological Monitoring for the L-31E Culvert Project as part of the Biscayne Bay Coastal Wetlands project, in substantially the form attached hereto and made part hereof; authorizes the County Mayor or Mayor's designee to execute amendments to this agreement for time extension and to accept additional funds that may

become available for this agreement; and authorizes the County Mayor or Mayor's designee to exercise the provisions contained therein.

The foregoing resolution was offered by Commissioner , who moved its adoption. The motion was seconded by Commissioner and upon being put to a vote, the vote was as follows:

Dennis C. Moss, Chairman
Jose "Pepe" Diaz, Vice-Chairman

Bruno A. Barreiro	Audrey M. Edmonson
Carlos A. Gimenez	Sally A. Heyman
Barbara J. Jordan	Joe A. Martinez
Dorrin D. Rolle	Natacha Seijas
Katy Sorenson	Rebeca Sosa
Sen. Javier D. Souto	

The Chairperson thereupon declared the resolution duly passed and adopted this 4th day of November, 2010. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Peter S. Tell

ORIGINAL

SAP REFERENCE NO. 950000 4335

SOUTH FLORIDA WATER MANAGEMENT DISTRICT LOCAL GOVERNMENTAL AGREEMENT

AGREEMENT NO. 4600002160

BETWEEN THE

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

AND

MIAMI DADE COUNTY

THIS AGREEMENT is entered into as of the AUG 0 6 2010 by and between the South Florida Water Management District (**DISTRICT**) and Miami Dade County (**COUNTY**).

WHEREAS, the **DISTRICT** is a public corporation of the State of Florida, created by the Florida Legislature and given those powers and responsibilities enumerated in Chapter 373, Florida Statutes, to include entering into contracts with public agencies, private corporations or other persons; and

WHEREAS, the **DISTRICT** desires to provide financial assistance to the **COUNTY** to conduct the Ecological Monitoring for L-31-E Biscayne Bay Coastal Wetland Project; and

WHEREAS, the **COUNTY** warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms and conditions of this **AGREEMENT**; and

NOW, THEREFORE, in consideration of the covenants and representations set forth herein and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties agree as follows:

1. The **DISTRICT** agrees to contribute funds and the **COUNTY** agrees to perform the work set forth in Exhibit "A" attached hereto and made a part hereof, subject to availability of funds and in accordance with their respective authorities for the Ecological Monitoring for L-31-E Biscayne Bay Coastal Wetland Project.

2. The period of performance of this **AGREEMENT** shall commence on the date of execution of this **AGREEMENT** and shall continue for a period of Fifteen (15) months.

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3. The total **DISTRICT** contribution shall not exceed the amount of $26,997.39 The **DISTRICT** shall make payment upon completion and acceptance of the deliverables as described in the Payment and Deliverable Schedule set forth in Exhibit "B", which is attached hereto and made a part of this **AGREEMENT**. The **DISTRICT's** contribution is subject to adequate documentation to support actual expenditures within the not-to-exceed **AGREEMENT** funding limitation of $26,997.39 In no event shall the **DISTRICT** be liable for any contribution hereunder in excess of this amount. In the event the **COUNTY** is providing a cost sharing contribution as provided for in paragraph 5 below, the **COUNTY** shall provide evidence that its minimum cost share has been met for each invoice submitted. The subject cost share documentation shall be included with each invoice. If the total consideration for this **AGREEMENT** is subject to multi-year funding allocations, funding for each applicable fiscal year of this **AGREEMENT** will be subject to Governing Board budgetary appropriation. In the event the **DISTRICT** does not approve funding for any subsequent fiscal year, this **AGREEMENT** shall terminate upon expenditure of the current funding, notwithstanding other provisions in this **AGREEMENT** to the contrary. The **DISTRICT** will notify the **COUNTY** in writing after the adoption of the final **DISTRICT** budget for each subsequent fiscal year if funding is not approved for this **AGREEMENT**.

4. The **COUNTY** shall submit quarterly financial reports to the **DISTRICT** providing a detailed accounting of all expenditures incurred hereunder throughout the term of this **AGREEMENT**. The **COUNTY** shall report and document the amount of funds expended per month during the quarterly reporting period and the **AGREEMENT** expenditures to date within the maximum not-to-exceed **AGREEMENT** funding limitation.

5. The **COUNTY** is not required to cost share any specific and determined amount for this **AGREEMENT.**

6. All work to be performed under this **AGREEMENT** is set forth in Exhibit "A", Statement of Work, which is attached hereto and made a part of this **AGREEMENT**. The **COUNTY** shall submit quarterly progress reports detailing the status of work to date for each task. The work specified in Exhibit "A" shall be under the direction of the **COUNTY** but shall be open to periodic review and inspection by either party. No work set forth in Exhibit "A" shall be performed beyond the expiration date of the contract unless authorized through execution of an amendment to cover succeeding periods.

7. The **COUNTY** is hereby authorized to contract with third parties (subcontracts) for services awarded through a competitive process required by Florida Statutes. The **COUNTY** shall not subcontract, assign or transfer any other work under this **AGREEMENT** without the prior written consent of the **DISTRICT's** Project Manager. The **COUNTY** agrees to be responsible for the fulfillment of all work elements included in any subcontract and agrees to be responsible for the payment of all monies due under any subcontract. It is understood and agreed by the **COUNTY** that the **DISTRICT** shall not be liable to any subcontractor for any expenses or liabilities incurred under the subcontract(s).

8. Both the **DISTRICT** and the **COUNTY** shall have joint ownership rights to all work items, including but not limited to, all documents, technical reports, research notes, scientific data, computer programs, including the source and object code, which are

developed, created or otherwise originated hereunder by the other party, its subcontractor(s), assign(s), agent(s) and/or successor(s) as required by the Exhibit "A", Statement of Work. Both parties' rights to deliverables received under this **AGREEMENT** shall include the unrestricted and perpetual right to use, reproduce, modify and distribute such deliverables at no additional cost to the other party. Notwithstanding the foregoing, ownership of all equipment and hardware purchased by the **COUNTY** under this **AGREEMENT** shall be deemed to be the property of the **COUNTY** upon completion of this **AGREEMENT**. The **COUNTY** shall retain all ownership to tangible property.

9. The **COUNTY**, to the extent permitted by law, assumes any and all risks of personal injury, bodily injury and property damage attributable to negligent acts or omissions of the **COUNTY** and the officers, employees, servants and agents thereof. The **COUNTY** represents that it is self-funded for Worker's Compensation and liability insurance, covering bodily injury, personal injury and property damage, with such protection being applicable to the **COUNTY,** its officers and employees while acting within the scope of their employment during performance of under this **AGREEMENT**. In the event that the **COUNTY** subcontracts any part or all of the work hereunder to any third party, the **COUNTY** shall require each and every subcontractor to identify the **DISTRICT** as an additional insured on all insurance policies as required by the **COUNTY**. Any contract awarded by the **COUNTY** shall include a provision whereby the **COUNTY's** subcontractor agrees to indemnify, pay on behalf, and hold the **DISTRICT** harmless from all damages arising in connection with the **COUNTY's** subcontract.

10. The **COUNTY** and the **DISTRICT** further agree that nothing contained herein shall be construed or interpreted as (1) denying to either party any remedy or defense available to such party under the laws of the State of Florida; (2) the consent of the State of Florida or its agents and agencies to be sued; or (3) a waiver of sovereign immunity of the State of Florida beyond the waiver provided in Section 768.28, Florida Statutes.

11. The parties to this **AGREEMENT** are independent entities and are not employees or agents of the other parties. Nothing in this **AGREEMENT** shall be interpreted to establish any relationship other than that of independent entities, between the **DISTRICT**, the **COUNTY**, their employees, agents, subcontractors or assigns, during or after the term of this **AGREEMENT**. The parties to this **AGREEMENT** shall not assign, delegate or otherwise transfer their rights and obligations as set forth in this **AGREEMENT** without the prior written consent of the other parties. Any attempted assignment in violation of this provision shall be void.

12. The parties to this **AGREEMENT** assure that no person shall be excluded on the grounds of race, color, creed, national origin, handicap, age or sex, from participation in, denied the benefits of, or be otherwise subjected to discrimination in any activity under this **AGREEMENT**.

13. The **COUNTY**, its employees, subcontractors or assigns, shall comply with all applicable federal, state and local laws and regulations relating to the performance of this **AGREEMENT**. The **DISTRICT** undertakes no duty to ensure such compliance, but will attempt to advise the **COUNTY**, upon request, as to any such laws of which it has present knowledge.

14. Either party may terminate this **AGREEMENT** at any time for convenience upon thirty (30) calendar days prior written notice to the other party. In the event of termination, all funds not expended by the **COUNTY** for authorized work performed through the termination date shall be returned to the **DISTRICT** within sixty (60) days of termination.

15. The **COUNTY** shall allow public access to all project documents and materials in accordance with the provisions of Chapter 119, Florida Statutes. Should the **COUNTY** assert any exemptions to the requirements of Chapter 119 and related Statutes, the burden of establishing such exemption, by way of injunctive or other relief as provided by law, shall be upon the **COUNTY**.

16. The **COUNTY** shall maintain records and the **DISTRICT** shall have inspection and audit rights below. The **COUNTY** shall similarly require each subcontractor to maintain and allow access to such records for audit purposes:

A. Maintenance of Records: The **COUNTY** shall maintain all financial and non-financial records and reports directly or indirectly related to the negotiation or performance of this **AGREEMENT** including supporting documentation for any service rates, expenses, research or reports. Such records shall be maintained and made available for inspection for a period of five (5) years from the expiration date of this **AGREEMENT**.

B. Examination of Records: The **DISTRICT** or designated agent shall have the right to examine in accordance with generally accepted governmental auditing standards all records directly or indirectly related to this **AGREEMENT**. Such examination may be made only within five (5) years from the expiration date of this **AGREEMENT**.

C. Extended Availability of Records for Legal Disputes: In the event that the **DISTRICT** should become involved in a legal dispute with a third party arising from performance under this **AGREEMENT**, the **COUNTY** shall extend the period of maintenance for all records relating to the **AGREEMENT** until the final disposition of the legal dispute. All such records shall be made readily available to the **DISTRICT**.

17. Whenever the **DISTRICT's** contribution includes state or federal appropriated funds, the **COUNTY** shall, in addition to the inspection and audit rights set forth in paragraph 16 above, maintain records and similarly require each subcontractor to maintain and allow access to such records in compliance with the requirements of the Florida State Single Audit Act and the Federal Single Audit Act, as follows:

A. Maintenance of Records: The **DISTRICT** shall provide the necessary information to the **COUNTY** as set forth in Exhibit "C". The **COUNTY** shall maintain all financial/non-financial records through:

(1) Identification of the state or federal awarding agency, as applicable
(2) Project identification information included in the Catalog of State Financial Assistance (CSFA) or the Catalog of Federal Financial Assistance (CFDA), as applicable
(3) Audit and accountability requirements for state projects as stated in the Single Audit Act and

applicable rules of the Executive Office of Governor, rules of the Chief Financial Officer and rules of the Auditor General and the State Projects Compliance Supplement

(4) Audit/accountability requirements for federal projects as imposed by federal laws and regulations

(5) Submission of the applicable single audit report to the **DISTRICT**, as completed per fiscal year

B. Examination of Records: The **DISTRICT** or designated agent, the state awarding agency, the state's Chief Financial Officer and the state's Auditor General and/or federal awarding agency shall have the right to examine the **COUNTY's** financial and non-financial records to the extent necessary to monitor the **COUNTY's** use of state or federal financial assistance and to determine whether timely and appropriate corrective actions have been taken with respect to audit findings and recommendations which may include onsite visits and limited scope audits.

18. All notices or other communication regarding this **AGREEMENT** shall be in writing and forwarded to the attention of the following individuals:

South Florida Water Management District	**Miami Dade County-DERM**
Attn Bahram Charkhian, Project Manager Attn:Patrick Wiener, Contract Specialist	Attn: Steve Blair, Project Manager
3301 Gun Club Road West Palm Beach, FL 33406 Telephone No. (561) 682-6220	Address: 701 N.W. First Court Miami, FL 33136 Telephone No. (305) 372-6853

19. Invoices, clearly marked "ORIGINAL", shall be sent to the attention of Accounts Payable at the **DISTRICT's** address specified below. All invoices shall reference the **AGREEMENT** and SAP Reference Numbers specified on page one of this **AGREEMENT**. In addition, a copy of the invoice shall be sent to the attention of the **DISTRICT's** Project Manager either at the address specified in paragraph 18 above or via Facsimile (FAX) using the FAX number also specified above.

South Florida Water Management District
Attention: Accounts Payable
P.O. Box 24682
West Palm Beach, Florida 33416-4682

20. **COUNTY** recognizes that any representations, statements or negotiations made by **DISTRICT** staff do not suffice to legally bind **DISTRICT** in a contractual relationship unless they have been reduced to writing and signed by an authorized **DISTRICT** representative. This **AGREEMENT** shall inure to the benefit of and shall be binding upon the parties, their respective assigns, and successors in interest.

21. This **AGREEMENT** may be amended, extended or renewed only with the written approval of the parties. The **DISTRICT** shall be responsible for initiating any amendments to this **AGREEMENT**, if required.

22. This **AGREEMENT**, and any work performed hereunder, is subject to the Laws of the State of Florida. Nothing in this **AGREEMENT** will bind any of the parties to perform beyond their respective authority, nor does this **AGREEMENT** alter the legal rights and remedies which the respective parties would otherwise have, under law or at equity.

23. Should any term or provision of this **AGREEMENT** be held, to any extent, invalid or unenforceable, as against any person, **COUNTY** or circumstance during the term hereof, by force of any statute, law, or ruling of any forum of competent jurisdiction, such invalidity shall not affect any other term or provision of this **AGREEMENT**, to the extent that the **AGREEMENT** shall remain operable, enforceable and in full force and effect to the extent permitted by law.

24. Failures or waivers to insist on strict performance of any covenant, condition, or provision of this **AGREEMENT** by the parties shall not be deemed a waiver of any of its rights or remedies, nor shall it relieve the other party from performing any subsequent obligations strictly in accordance with the terms of this **AGREEMENT**. No waiver shall be effective unless in writing and signed by the party against whom enforcement is sought. Such waiver shall be limited to provisions of this **AGREEMENT** specifically referred to therein and shall not be deemed a waiver of any other provision. No waiver shall constitute a continuing waiver unless the writing states otherwise.

25. Any dispute arising under this **AGREEMENT** which cannot be readily resolved shall be submitted jointly to the signatories of this **AGREEMENT** with each party agreeing to seek in good faith to resolve the issue through negotiation or other forms of non-binding alternative dispute resolution mutually acceptable to the parties. A joint decision of the signatories, or their designees, shall be the disposition of such dispute.

26. This **AGREEMENT** states the entire understanding and agreement between the parties and supersedes any and all written or oral representations, statements, negotiations, or agreements previously existing between the parties with respect to the subject matter of this **AGREEMENT**.

27. Any inconsistency in this **AGREEMENT** shall be resolved by giving precedence in the following order:
(a) Terms and Conditions outlined in preceding paragraphs 1 – 26
(b) Exhibit "A" Statement of Work
(c) Exhibit "B" Payment and Deliverable Schedule
(d) all other exhibits, attachments and documents specifically incorporated herein by reference

IN WITNESS WHEREOF, the parties or their duly authorized representatives hereby execute this **AGREEMENT** on the date first written above.

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

By: Dorothy Bradshaw, Deputy Dir. Procurement
for Jessica J Flathmann, Director of Procurement

SFWMD PROCUREMENT APPROVED
By: Patrick Wiener
Date: 7-13-2010

MIAMI DADE COUNTY

Rae R Acher
for Jennifer Glazer-Moon

By: Alex Munoz,
Name of Authorized Individual

Title: Assistant County Manager
Miami-Dade County

COUNTY COMMISSIONERS DADE COUNTY FLORIDA

Deputy Clerk

EXHIBIT "A"
Statement of Work

ECOLOGICAL MONITORING FOR L-31E PROJECT
Biscayne Bay Coastal Wetland Project

1.0 INTRODUCTION

The L-31E Culverts are an early work project element of the Biscayne Bay Coastal Wetlands (BBCW) – Phase 1 project, a component of the Comprehensive Everglades Restoration Plan (CERP). The project is located in southeastern Miami-Dade County. The L-31E Culverts project, in conjunction with future implementation of the L-31E Flow Way project, is intended to achieve several of the objectives of the CERP, namely; improve distribution of freshwater to Biscayne Bay and Biscayne National Park (BNP), improve freshwater and estuarine habitat, improve salinity distribution within Biscayne Bay and re-establish productive nursery habitat along the bay shoreline. These objectives are achieved in a relatively simple manner; re-directing runoff from the respective basins that is currently being discharged to tide at coastal structures S-21A, S-20F and S-20G for ultimate discharge to the coastal wetlands along Biscayne Bay. These objectives are met by delivery of available freshwater by gravity flow through culverts in the L-31E levee to coastal wetlands along the bay shoreline. The project includes constructing four culverts with manatee barriers and flap gates in the L-31E levee.

This document serves as a comprehensive reference for ecological quality monitoring for the L-31E Project within the Biscayne Bay Coastal Wetlands (BBCW) Project study area (Figure 1). This monitoring plan has been designed to provide information needed to evaluate the L-31E's performance in meeting restoration goals and to satisfy anticipated ecological data collection requirements, of the Department of the Army 404 permit (Permit #SAJ-1994-1327[IP-TKW], Date of issue: May 15, 2008, Expiration date: November 13, 2012).

The guidance contained in this document will help maintain consistency in sampling locations, parameters, and frequencies, as well as providing documentation of the project scope.

Table 1. L-31E Culvert Locations

Name	Type of Structure	Latitude	Longitude	Project	Function and/or Description
S-23A	Gated culvert	25° 30' 59"	80° 20' 49	L-31E	Located in L-31E borrow canal, south of the C-102/ Princeton Canal and north of S-23B on L-31E Canal
S-23D	Gated culvert	25° 28' 37"	80° 20' 48"	L-31E	Located in L-31E borrow canal between the C-103/ Mowry and Military Canal

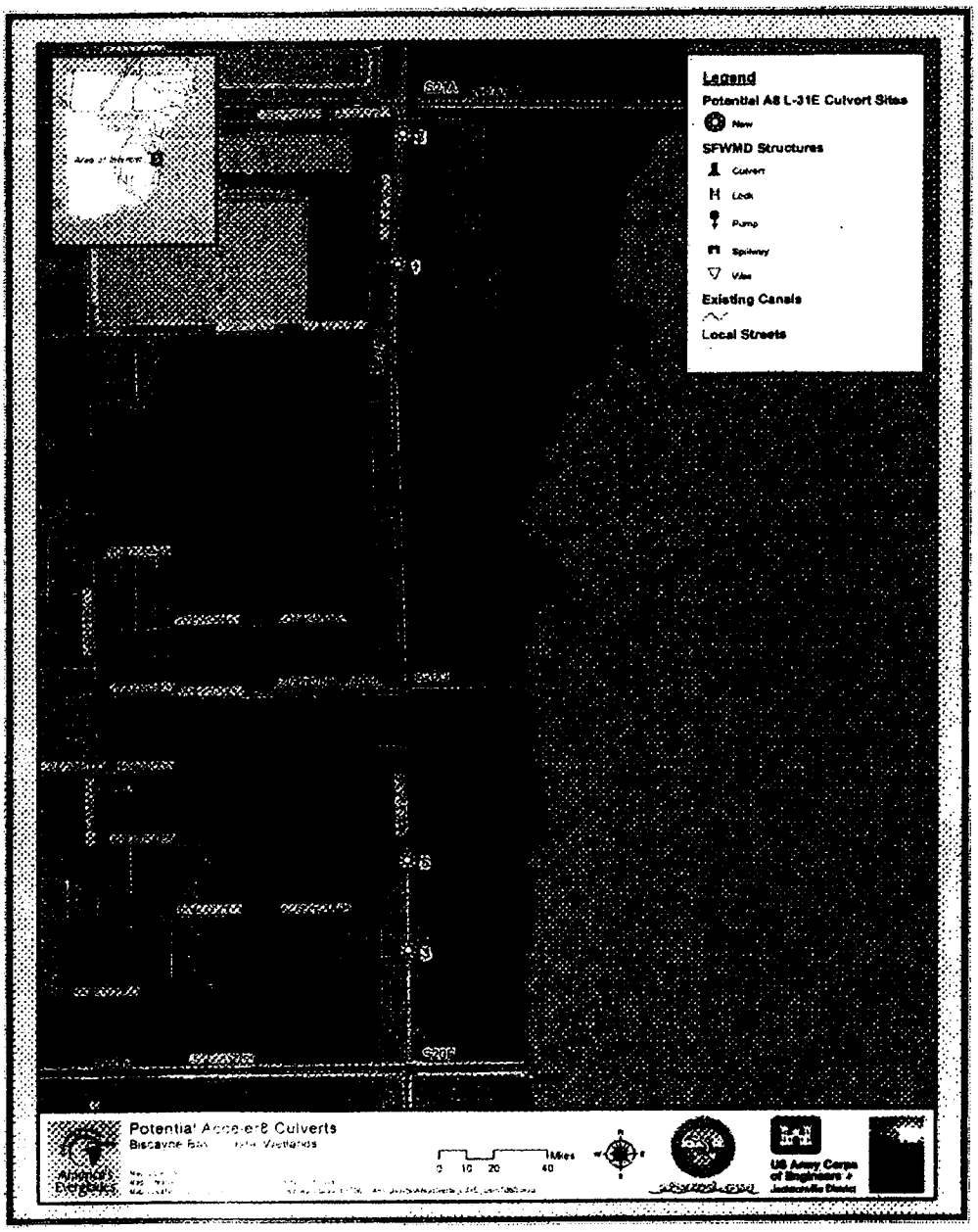


Figure 1. Biscayne Bay Coastal Wetlands; L-31 E Acceler8 Features

2.0 OBJECTIVES

- The objective of the L-31E Project is to provide freshwater flow into Biscayne Bay and redirect the flow into wetlands and estuarine communities, thereby removing contaminants from stormwater runoff. The L-31E culverts affect only the area between the C-102 and C-103 culverts.

- To evaluate the performance of the L-31E Project benefits, which include enhancement of salinity concentrations, water stages, and wetland vegetation within the wetland areas affected by culvert water deliveries

- To satisfy the anticipated requirements of Department of the Army 404 permit #SAJ-1994-1327[IP-TKW].

- To provide timely feedback for operational considerations and verify that discharge from the culverts does not violate Class III water quality standards.

3.0 GEOGRAPHIC LOCATION

3.1 Regional Area and Project Location

The L-31E is an element of the Biscayne Bay Coastal Wetlands (BBCW) Project and is located in southeastern Miami-Dade County. The Project site is located in Range 40E, Township 56S, Section 33 and Range 40E, Township 57S, Sections 4, 9, and 16 as illustrated in Figure 2.

The Project includes the following elements:

- Gated culvert
- At-grade discharge conveyance channel
- Discharge structure
- Discharge spreader canal
- Rehydration area

The general locations of the Project's major design elements are illustrated schematically on Figure 1 and Table 1.

4.0 SCOPE OF WORK

Since this is an adaptive statement of work, it is expected that the scope of work may change during the term of this agreement as a result of recurrent data evaluations to meet Biscayne Bay Coastal, L31-E Project objectives. Any changes to the scope of work must be approved by both the District and the **County** project managers prior to implementation.

- The **County** shall collect samples as specified in this agreement for a variety of parameters that specified in tables 2, and 3 of this document. The **County** shall have a quality system in place to help ensure that the data generated are of acceptable and verifiable quality and are representative of actual field conditions

- The **County** shall conduct Base line (time zero) and monthly surface monitoring at stations that were specified in tables 2 and 3 and figures 1, 2, and 3. Since this is an adaptive statement of work, it is expected that the scope of work may change during the term of this agreement as a result of recurrent data evaluations. Any changes to the scope of work must be approved by both the District and DERM project managers prior to implementation

  The **County** shall be submitted baseline report and quarterly reports at the end of each month with the date of date of submittal listed in the Task Description and Work Order (see tables 4 and 5). The **County** shall provide an electronic copy of the monthly report that will include at minimum the following: 1) identify activities undertaken during the reporting period; 2) state any problems encountered; 3) attest to the validity of the data; 4) include all quality assurance data with laboratory and field QA/QC reports (*i.e.*, the results of field blanks, equipment blanks, precision as percent relative standard deviation, accuracy checks, method blanks and calibration data (initial and continuing verification)) consistent with the Field Service Quality Manual (FSQM); 5) briefly summarize quarterly water quality conditions in the network; 6) include electronic scans of all sample chain of custody forms, field equipment calibration, field equipment maintenance and field notes in accordance with the deliverable schedule; 8) GPS coordinates all monitoring sites and GIS maps monitoring networks; and 7) include all electronic analytical data in accordance with the deliverable schedule.

5.0 SCOPE OF WORK

This project consists of the following components

5.1.0 Ecological Monitoring

- **Physical Parameters**: The **County** shall collect samples at 4 monitoring stations that were specified in tables 1, 2 and 3, and figures 1, 2, 3, 4, and 5 of this document for: Temperature, pH, conductivity, DO, and salinity (Baseline Conditions of the Site (one event) and routine operational ecological monitoring (frequency: monthly)).
- **Wetland stages:** The **County** shall record wetland stages (water level) at four monitoring stations that were specified in tables 1, 2 and 3, and figures 1, 2, 3, 4, and 5 of this document (Baseline Conditions of the Site (one event) and routine operational ecological monitoring (frequency: monthly)).
- **Wetland vegetation transects (vegetation cover by species along a transect (within an acre)):** The **County** 's ecologist shall conduct inventory all vegetation cover along (within one acre) of culverts S-23A and S-23D , documenting and photographing any changes (See tables 1, 2 and 3, and figures 1, 2, 3, 4, and 5 of this document) . Baseline Conditions of the Site (one event) and routine operational ecological monitoring (frequency: monthly).

Table 2. Ecological Monitoring Regime to satisfy the Department of the Army 404 permit for L-31E (Baseline Conditions of the Site)

Location of monitoring Sites		Collection Method	Matrix	Monitoring effort (New/ Existing)	Frequency	Parameters
Culvert S-23A	Immediately downstream of culvert 1 (S-23A)	Grab	Water	New	One-Event	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	One-Event	Staff gauges (at S-23A)
	100 meters downstream of culvert 1(S-23A)	Grab	Water	New	One-Event	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	One-Event	Water level (wetland stages) *
Culvert S-23D	Immediately downstream of culvert 5 (S-23D)	Grab	Water	New	One-Event	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	One-Event	Staff gauges (at S-23D
	100 meters downstream of culvert 5(S-23D).... Within an Acre	Grab	Water	New	One-Event	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	One-Event	Water level (wetland stages) *
Wetland vegetation transect at culvert S-23A and culvert S-23D. 100 meter transect east of the inner at culvert S-23A and S-23D (within an acre). Transects will contain with the water quality monitoring stations. Vegetation cover along the transect will be documented visually each time water quality is collected at the 100 M station (within an acre).	Vegetation cover along the transect will be documented visually each time water quality is collected at the 100 M station (within an acre). **	Visual	Wetland vegetation	New	One-Event	Wetland vegetation-vegetation cover by species along a transect (within an acre) **

* See page 47

** Vegetation shall be monitored along two (2) permanent 100 meter transects utilizing the line-intercept method. Species occurring within the ground cover stratum will be measured first, followed by species occurring in the subcanopy and canopy strata, so that movement through the area does not trample the groundcover prior to data

collection. Individual plant species will be measured along a line intercept transect by recording the point along the transect tape where the vegetation begins and the point at which it ends. When these intercepts (i.e., distances) are added and divided by the total length of the transect (e.g. 100 meters), the result is a percentage cover for each species along the transect. Assuming the vegetative composition along the transect is representative of the entire site, this percentage cover can be extrapolated to infer vegetative composition within an acre and detect shifts in vegetation over time. The **County** shall submit GPS Coordinates of all monitoring sites and GIS maps.

The following is a qualitative characterization of the plant species observed within the proposed monitoring areas on May 26, 2010:

Table 2 A. List of plant species observed within the proposed monitoring areas on May 26, 2010

Scientific Name	Common Name
Acrostichum aureum	golden leather fern
Annona glabra	pond apple
Ardisia elliptica	shoebutton ardisia
Avicinnia germinans	black mangrove
Baccharis angustifolia	saltwater falsewillow
Casuarina equisetifolia	Australian pine
Cladium jamaicensis	sawgrass
Conocarpus erectus	buttonwood
Encylclia tampensis	butterfly orchid
Laguncularia racemosa	white mangrove
Metopium toxiferum	poison wood
Psilotum nudum	whisk fern
Rhabdadenia biflora	mangrove vine
Rhizophora mangle	red mangrove
Schinus terebinthifolia	Brazilian pepper
Tillandsia utriculata	giant wild pine

Table 3. Ecological Monitoring Regime to satisfy the Department of the Army 404 permit for L-31E Project (Routine Operational Monitoring Phase)

Location of monitoring Sites		Collection Method	Matrix	Monitoring effort (New/ Existing)	Frequency	Parameters
Culvert S-23A	Immediately downstream of culvert S-23A	Grab	Water	New	Monthly	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	Monthly	Staff gauges (at S-23A
	100 meters downstream of culvert S-23A	Grab	Water	New	Monthly	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	Monthly	Water level (wetland stages)
Culvert S-23D	Immediately downstream of culvert S-23D	Grab	Water	New	Monthly	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	Monthly	Staff gauges (at S-23D
	100 meters downstream of culvert S-23D (within an acre)	Grab	Water	New	Monthly	Temperature, pH, conductivity, dissolved oxygen, salinity
		Visual	Water	New	Monthly	Water level (wetland stages)
Wetland vegetation transects at culvert S-23A and culvert S-23D 100 meters transects east of the [illegible] S-23A and S-23D (within an acre). Transects will coincide with the water quality monitoring stations. Vegetation cover along the transect will be documented visually each time water quality is collected at the 100 M station (within an acre).	Vegetation cover along the transect will be documented visually each time water quality is collected at the 100 M station (within an acre) **	Visual	Wetland vegetation	New	Monthly	Wetland vegetation-vegetation cover by species along a transect (within an acre) **

** Vegetation shall be monitored along two (2) permanent 100 meter transects utilizing the line-intercept method. Species occurring within the ground cover stratum will be measured first, followed by species occurring in the subcanopy and canopy strata, so that movement through the area does not trample the groundcover prior to data collection. Individual plant species will be measured along a line intercept transect by

recording the point along the transect tape where the vegetation begins and the point at which it ends. When these intercepts (i.e., distances) are added and divided by the total length of the transect (e.g. 100 meters), the result is a percentage cover for each species along the transect. Assuming the vegetative composition along the transect is representative of the entire site, this percentage cover can be extrapolated to infer vegetative composition within an acre and detect shifts in vegetation over time. The **County** shall submit GPS Coordinates of all monitoring sites and GIS maps.

The following is a qualitative characterization of the plant species observed within the proposed monitoring areas on May 26, 2010:

Table 3 A. List of plant species observed within the proposed monitoring areas on May 26, 2010

Scientific Name	Common Name
Acrostichum aureum	golden leather fern
Annona glabra	pond apple
Ardisia elliptica	shoebutton ardisia
Avicinnia germinans	black mangrove
Baccharis angustifolia	saltwater falsewillow
Casuarina equisetifolia	Australian pine
Cladium jamaicensis	sawgrass
Conocarpus erectus	buttonwood
Encylclia tampensis	butterfly orchid
Laguncularia racemosa	white mangrove
Metopium toxiferum	poison wood
Psilotum nudum	whisk fern
Rhabdadenia biflora	mangrove vine
Rhizophora mangle	red mangrove
Schinus terebinthifolia	Brazilian pepper
Tillandsia utriculata	giant wild pine

6.0 DATA MANAGEMENT AND REPORTING

The Biscayne Bay National Park assigned museum accession number BISC-257 for this study # BISC-10015 titled, "Biscayne Bay Coastal Wetland Project - Ecological Monitoring Plan for L-31E Project". Note that this is a three-part number consisting of the park acronym, the hyphen and the number. The ***County*** *shall refer to this number in field notes and reports (accession number will refer only to the project archives (copies of field notes, raw data, reports, etc.). See Appendix E+F*

6.1 Data Format and Deliverables

The data shall be submitted to the **DISTRICT** in a specific digital format. The **County** shall validate the data in accordance with the data quality objectives stated in the monitoring plan and this agreement. At a minimum, the County shall validate the data to determine conformance to field and laboratory method and QA/QC requirements, meeting accuracy and precision targets, that documentation and entries are complete and accurate, that the results are reasonable and within historical limits, and that any anomalous results or non-conformances are reflected in data reports by using appropriate data qualifiers.

6.2 Project Library

An electronic project library shall be generated by the **County** to document project specific requirements. The **County** Project Manager shall review and approve electronic project library prior to its use. This library shall be used by the **County** and **DISTRICT** staff during the EDD error check and data validation process. Any changes in laboratory protocols that affect the project library need to be communicated to the **DISTRICT** and once approved incorporated in the project library. When libraries are updated, copies of the updated libraries shall be submitted along with the quarterly EDD's.

7.0 QUALITY CONTROL AND CUSTODY

The Biscayne Bay National Park assigned museum accession number BISC-257 for this study # BISC-10015 titled, "Biscayne Bay Coastal Wetland Project - Ecological Monitoring Plan for L-31E Project". Note that this is a three-part number consisting of the park acronym, the hyphen and the number. The ***County*** *shall refer to this number in field notes and reports (accession number will refer only to the project archives (copies of field notes, raw data, reports, etc.). See Appendix E+F.*

7.1 Ethics and Data Integrity

Every person performing field sampling must commit to following project specific requirements, South SFWMD field SOPs or Miami-DERM field SOP, the requirements in the FSQM, CERP Quality Assurance Systems Requirements (QASR) and other instructions as issued, to ensure that samples collected are of acceptable quality and legally defensible. For further information, see the District's FSQM, Quality Assurance Systems Requirements (QASR), or Miami-DERM FSQM Ethics Policy.

7.2 Documentation

Field documentation shall be sufficient and clear to allow history tracking for any sample collected or any measurement performed. Accuracy, consistency, and legibility are key factors that will enhance the utilization of the field data. For all documents, the following standards should apply:

- Print text, do not use cursive
- Dates must be recorded as MM/DD/YYYY
- Time must be recorded in 24 hour format using local time
- Logs and notes must be recorded on site and at the time of collection

- Entries are to be made electronically or in waterproof ink
- Samplers must be registered in the appropriate database
- GPS Coordinates of all monitoring sites

For more details, see the District FSQM, QASR and FDEP SOP FD 1000.

7.2.1 Field Notes

Relevant field observations, as required by FDEP SOPs, can be in hard copy (waterproof paper) or electronic format. Field notes shall be stored in a bound notebook that is project specific. Please refer to the SFWMD FSQM and the QASR for more detail. Field service contractors shall provide copies of all field notes to the District within one week of sample collection.

7.2.2 Calibration Sheet

The **County** shall ensure that the proper equipment protocols, as identified in the approved QAPP, are used to collect each sample. The Contractor shall send samples to a NELAP certified laboratory for analysis as per Chapter 64E F.A.C and the QASR. Field multiparameter probe calibrations shall be recorded as required on a supplemental page of the header sheet in hard copy or electronic format.

7.3 Field Data Validation and Responsibilities

All staff associated with the project is responsible for ensuring the accuracy and completeness of data.

7.3.1 Sampling Team

The sample team shall review and validate the sampling data collected during the course of the sampling event. This includes header sheets, field notes, and calibration sheets. Signature by the samplers indicates the data have been reviewed and validated.

7.3.2 Project/Contract Manager

The field project manager shall be responsible for reviewing header sheets, field notes, and calibration sheets as well as the entry of these items into the database. In addition, field project managers are responsible for ensuring that field notes are available electronically for end users.

7.3.3 Quality Assurance

Quality Assurance staff shall be responsible for performing annual laboratory and field audits. Audit reports will be prepared, distributed, and retained by the division conducting the audit. Audits will be performed to evaluate adherence to regulatory requirements for field and laboratory activities.

7.3.4 Corrections

If sample collectors, the laboratory, or the project manager discover errors in any of the field notes, header sheets, or calibration sheets, corrections may be required. Changes are made by striking through the error, writing the correction, initialing and dating the change. Corrective actions shall include a detailed explanation of the error and may include data flagging, system audits, or reworking or recollection of samples.

7.4 Sample Submission

Samples shall be transported on wet ice at 4° Celsius to the laboratory for analysis within required holding times. Samples shall be submitted as described in the FDEP SOPs. Laboratory staff shall "time stamp" the sample header (Chain of Custody) sheet and verify that all samples arrive with the required preservation (e.g. cooling and acidification) and signatures.

7.5 Field Audits

Audits are an essential part of the quality assurance program and are conducted to measure compliance with the requirements included in this monitoring plan and the FSQM.

7.5.1 Frequency of Audits

At a minimum, field audits will be performed annually by the designated auditor for the project. Field audits may be done with or without notice, or on a more frequent basis, depending on perceived need. In addition, the designated project laboratory auditor will perform audits to evaluate adherence to project and procedural requirements for laboratory activities.

7.5.2 Audit Reports, Corrective Actions, and Responses

Findings of an audit and corresponding corrective actions shall be summarized in a formal audit report and sent to the field project manager, staff supervisor, and/or external contractors. The District QA Administrator is responsible for evaluating the accuracy of the audit findings. The field project manager and staff supervisor are responsible for responding to the audit and discussing deficiencies and corrective actions with specific staff. A written response shall be submitted within one month of the audit report. Data gathered during a period when significant deficiencies were noted may be flagged accordingly.

7.5.3 Modification or Termination Conditions

If a specific parameter is consistently not present above the detection limit, or a criterion is found consistently in compliance with Class III Water Quality Standards (where available), a modification may be requested to reduce the frequency or remove that parameter.

7.5.4 Emergency Suspension of Sampling

Under hurricane, tropical storm warnings, or other extreme weather condition, sampling may be suspended if necessary. The District shall be notified of suspension and subsequent resumption sampling.

8.0 DATA AND RECORDS MANAGEMENT

After the data validation process, all data are archived in the DBHYDRO and the **County** database and maintained so that end users can retrieve and review all information relative to a sampling event. Field notes are maintained on an internal server either by scanning actual field note pages (PDF) or by uploading narratives from field computers (CSV or comma-delineated). All analytical data and field conditions are sent to a database designated by the sponsors for long-term storage and retrieval. The **County** maintains records of field notes and copies of all records relative to the chain of custody

and analytical data. It is the responsibility of The **County** to maintain both current and historical method and operating procedures so that at any given time the conditions that were applied to a sampling event can be evaluated. For any contracted work, original documents are to be provided to the **District** by the project completion date.

9.0 REPORTING

The Biscayne Bay National Park assigned museum accession number BISC-257 for this study # BISC-10015 titled, "Biscayne Bay Coastal Wetland Project - Ecological Monitoring Plan for L-31E Project". Note that this is a three-part number consisting of the park acronym, the hyphen and the number. The **County** shall refer to this number in field notes and reports (accession number will refer only to the project archives (copies of field notes, raw data, reports, etc.).

Quarterly and Baseline reports will be submitted at the end of each month of the contract, with the date of submittal listed in the Task Description and Work Order. The **County** shall provide an electronic copy of these reports that will include at minimum the following: methods, results and statistical analyses of sampling efforts, discussion, conclusions, and lessons learned, preventive, and corrective actions. An electronic copy of raw data will also be provided.

Quarterly and baseline data reports shall: 1) identify activities undertaken during the reporting period; 2) state any problems encountered; 3) attest to the validity of the data; 4) include all quality assurance data with laboratory and field QA/QC reports (*i.e.*, the results of field blanks, equipment blanks, precision as percent relative standard deviation, accuracy checks, method blanks and calibration data (initial and continuing verification)) consistent with the Field Service Quality Manual (FSQM); 5) briefly summarize quarterly water quality conditions in the network; 6) include electronic scans of all sample chain of custody forms, field equipment calibration, field equipment maintenance and field notes in accordance with the deliverable schedule; 7) GPS coordinates of all monitoring sites and GIS maps; and 8) include all electronic analytical data in accordance with the deliverable schedule. **The monthly and baseline reports shall also include results of all internal and external system and performance audits, as well as any corrective actions shall be due within time firm specified in tables 4 and 5.**

10.0 DELIVERABLES SCHEDULE

Table 4- Deliverables Schedule

Quarterly Reporting	Deliverables	Due Date Final Report
Baseline data Collection and reporting Due Date: 7/26/2010	Data shall be collected as outlined and summarized monthly, and an invoice and progress report will be provided at the end of each month that documents data collection and analyses occurred	7/26/2010
	Baseline report shall provide a thorough description of the monitoring activity and results.	
	The County shall submit electronic file of the monthly report and all the data (original and converted) in tabulated ASCII tables, Excel spreadsheets, or Access database	
Monthly data Collection and reporting Due date : August 23,2010	Data shall be collected as outlined and summarized monthly, and an invoice and progress report will be provided at the end of each month that documents data collection and analyses occurred	August 23,2010
	The County shall submit electronic file of the monthly report and all the data (original and converted) in tabulated ASCII tables, Excel spreadsheets, or Access database	
Monthly data Collection and reporting First Quarter Report - Due date : September 22, 2010	Data shall be collected as outlined and summarized monthly, and an invoice and progress report will be provided at the end of each month that documents data collection and analyses occurred	September 22,2010
	The County shall submit electronic file of the monthly report and all the data (original and converted) in tabulated ASCII tables, Excel spreadsheets, or Access database	
First Quarter report- Monthly data Collection and reporting	Data shall be collected as outlined and summarized monthly, and an invoice and progress report will be provided at the end of each month that documents data collection and analyses occurred	12/20/2010
	The County shall submit electronic file of the monthly report and all the data (original and converted) in tabulated ASCII tables, Excel spreadsheets, or Access database	
2nd Quarter report- Monthly data Collection and reporting	Data shall be collected as outlined and summarized monthly, and an invoice and progress report will be provided at the end of each month that documents data collection and analyses occurred	3/28/2011
	The County shall submit electronic file of the monthly report and all the data (original and converted) in tabulated ASCII tables, Excel spreadsheets, or Access database	
Third Quarter report- Monthly data Collection and reporting	Data shall be collected as outlined and summarized monthly, and an invoice and progress report will be provided at the end of each month that documents data collection and analyses occurred	6/27/2011
	The County shall submit electronic file of the monthly report and all the data (original and converted) in tabulated ASCII tables, Excel spreadsheets, or Access database	
Fourth Quarter report- Monthly data Collection and reporting	Data shall be collected as outlined and summarized monthly, and an invoice and progress report will be provided at the end of each month that documents data collection and analyses occurred	9/26/2011
	The County shall submit electronic file of the monthly report and all the data (original and converted) in tabulated ASCII tables, Excel spreadsheets, or Access database	

11.0 CONTINGENCIES

Every effort shall be made to complete all the tasks as described; however, it is recognized that some measurements may be missed occasionally due to inclement weather, unforeseen unsafe working conditions, or equipment failure. The District may amend this contract for a time extension in the event of a natural disaster or major storm.

Expedient monitoring may be requested during or after unusual events that may affect water-related resources. While every effort shall be made to accommodate such requests, unscheduled monitoring shall be conducted based on staff availability and it is understood that some requests may not be

fulfilled. Field data collected from these sampling events shall be provided to the District in a preliminary letter report within one week of collection. The final version of these data shall conform to the formats described in the Deliverables section of this document and shall be reported in a separate section of the quarterly report for that period.

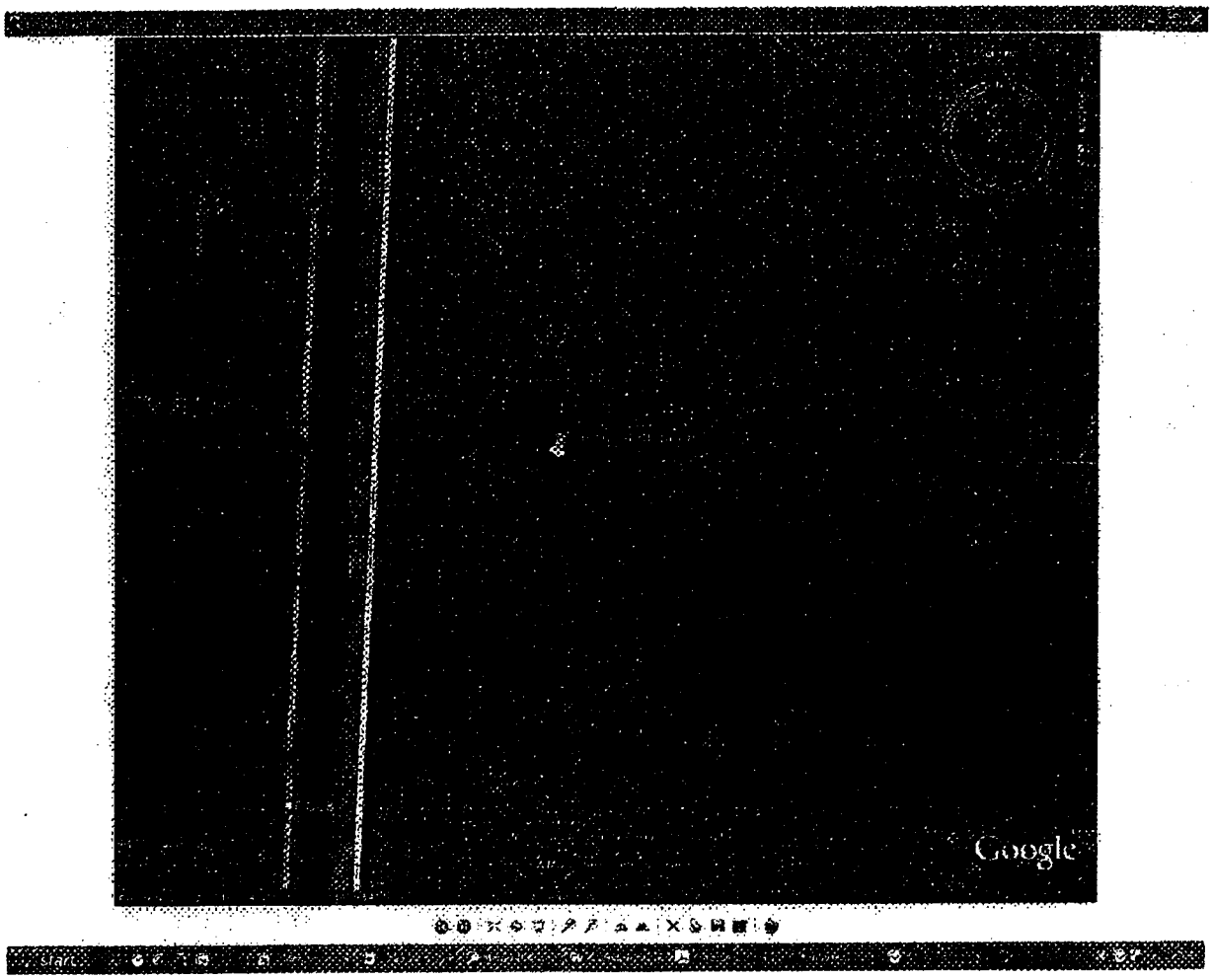


Figure 2- Approximate location of Water level (wetland stages) instrument at 100 meters downstream of S-23A

Figure 3- Approximate location of Water level (wetland stages) instrument at 100 meters downstream of S-23D

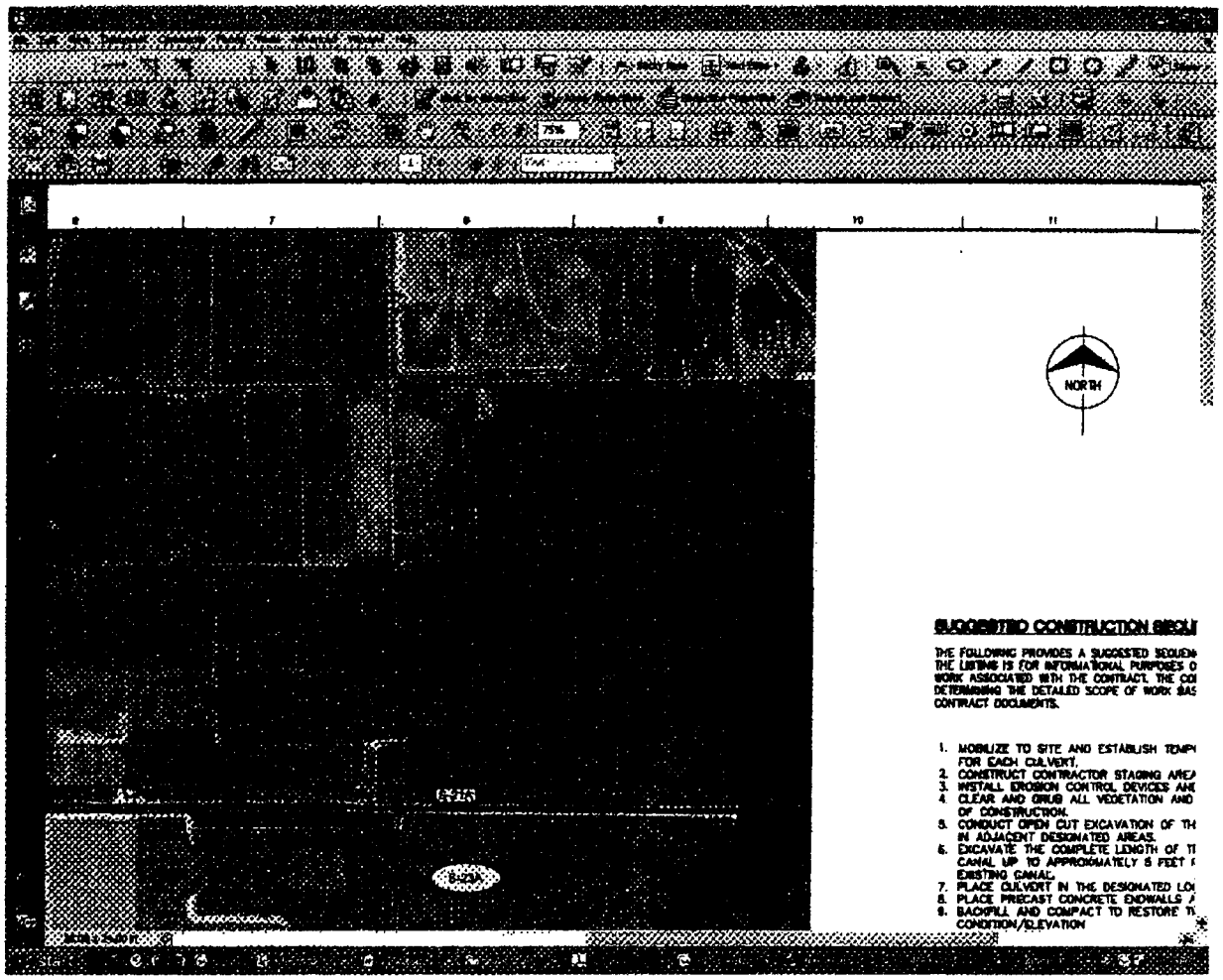


Figure 4- Location of Culvert S-23A

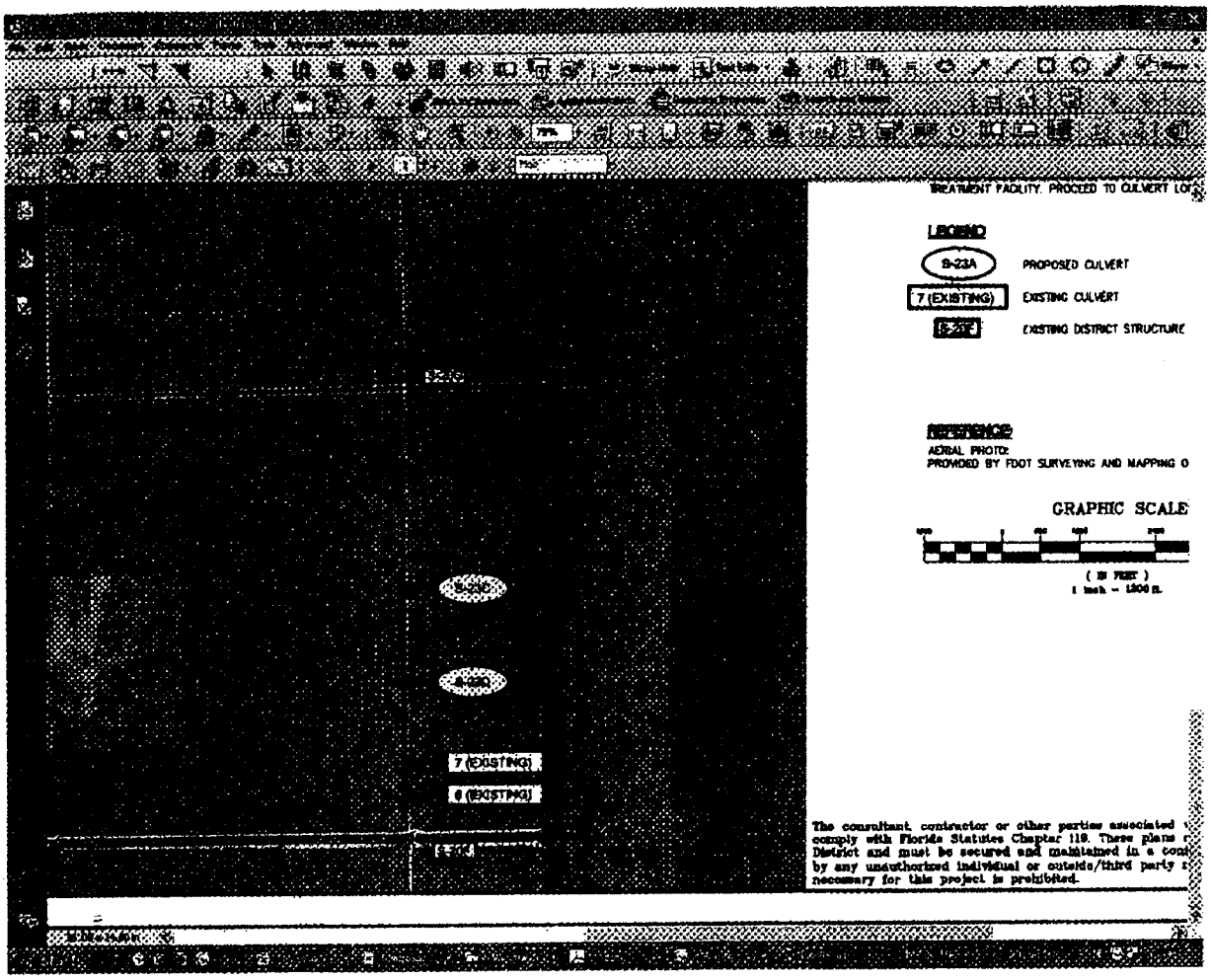


Figure 5- Location of Culvert S-23D

APPENDIX E

CURATORIAL REQUIREMENTS FOR COLLECTORS OF NATURAL HISTORY SPECIMENS at Big Cypress National Preserve Biscayne National Park Dry Tortugas National Park Everglades National Park

1/27/2004

Introduction

A museum collection is generated and maintained to document and support a park's resource management, research and interpretive programs. The NPS museum program objectives include the commitment to collect, document and preserve objects, specimens, samples and associated records as defined within a park's approved scope of collection statement (SOCS). The collection is a nonrenewable resource.

In the National Park Service (NPS), the Superintendent is responsible for the accountability, preservation, protection and use of the site's museum collections. The Superintendent ensures that all research projects generating museum specimens include funding to ensure that the cataloging and the initial preservation and storage requirements are accomplished. The Superintendent recommends or approves all planning documents that are related to the proper management of the museum collections. The day-to-day care for a park's collection is delegated by the Superintendent to the park curatorial staff. Park curatorial staff may also undertake the responsibility of researching and interpreting the collection. **The curatorial staff must be involved in reviewing specimen collecting activities, including permit requests, to insure that NPS curatorial requirements are met.**

Scope of Requirements

The curatorial requirements outlined in this document apply to both NPS and non-NPS researchers. Park-generated research projects and specimens collected by park staff are not exempt from these requirements.

Authority

The policies and procedures stated in this document are authorized by the following NPS policies and guidelines: NPS *Management Policies*, Director's Order #24 (NPS Museum Collection Management), Director's Order #77 (Natural Resource Management Guideline),

Director's Order #XX (Inventory and Monitoring Program), NPS Museum Handbook, Parts I-III and Automated National Catalog System (ANCS+) User's Manual.

Complete text of NPS policies is available at www.nps.gov/policy. Relevant excerpts for natural history collections are presented below.

The NPS *Management Policies* states:

> Natural resource collections include nonliving and living specimens and associated field records. If placed in exhibits or retained in permanent collections, nonliving specimens and their associated field records will be cataloged into a park's museum collection. (4:4)

Natural resource collections are managed according to NPS *Management Policies*, Museum Objects and Library Materials (5:9-11); Security and Protective Measures (5:13-14); and Preservation of Data and Collections and Protection of Research Potential (5:3-4).

Director's Order #24 (NPS Museum Collection Management) requires that the park Superintendent ensures that all projects undertaken with the park budget for curation of generated museum specimens. *Section 4.3.16 Project-generated Collections* states that Superintendent's must:

> Require project budgets to include funding for the basic management of collections that are project-generated. Collections management includes cataloging; labeling; conservation examination and treatment (including specimen preparation); initial storage of objects and specimens; and organization and storage of project documentation, including appraisal, arrangement, description, finding aid production and appropriate archival housing.
>
> - Before starting, permitting or contracting a project, specify in writing in the task directive, proposal, agreement, permit or contract, the parties responsible, the designated NPS or non-NPS repository, the collections management tasks and a time schedule for completion.
> - Fund subsequent ongoing maintenance costs of collections management from the operating base of the responsible park, center or other repository.
> - If project-generated collections cannot be accommodated in available storage space and new storage space construction is necessary, program to construct new space to accommodate the expanded collection. If interim storage is needed, specify in the project task directive the location of that storage, and state that it must meet NPS standards. Identify the funding source for interim storage.

Director's Order #77 (Natural Resource Management Guideline) states:

> A critical element in the preservation of permanently retained natural resource collections is ensuring that early and continuing consideration of curatorial concerns is

an integral part of the park's scientific research planning process. Many park research projects produce specimens that may have inherent long-term preservation value. The responsibility for the curation of such specimens and associated data must be determined by a park's scientific and curatorial staff prior to starting a research project and be written into the conditions of each research proposal, cooperative agreement, contract or collecting permit. Planning includes determining provisions for field documentation and preparation of specimens, identifying the recipient NPS or non-NPS repository for the specimens and ensuring that each project funds the cataloging and initial preservation and storage costs.

Definitions

Natural resource museum collection: A collection comprised of permanently retained specimens and samples taken from the living and nonliving components of the natural world and project documentation generated by the collecting and research activities. A specimen without its associated documentation has limited or no scientific value. The decision to permanently retain a specimen in a park's museum collection depends on the purpose of the collecting activity or the recommendations of the researcher/collector in consultation with park curatorial staff. General reference collections, voucher specimens, exhibit specimens and most research specimens are managed as part of a park's museum collection. Natural resource museum collections can include biological specimens, geological specimens, paleontological specimens and environmental samples.

Project Documentation: Data, records, reports and other related information generated as a result of research activities conducted within a park or on museum specimens collected in a park. Natural resource archives may contain field notes, daily journals, maps, drawings, photos and negatives, slides, videotapes, raw data sheets, remote sensing data, copies of contracts, correspondence, repository agreements, specialists' reports and analyses, reports and manuscripts, collection inventories, field catalogs, analytical study data, sound recordings, computer documentation and data, tabulations and lists, specimen preparation records, conservation treatment records and reports on all scientific samples lost through destructive analysis.

Ownership of Collections

All specimens collected for permanent retention, as well as their derivatives and byproducts, remain the property of the National Park Service. If you collect specimens that are to be permanently retained—regardless of where they are kept—those specimens must be accessioned and cataloged into the National Park Service's Automated National Catalog System (ANCS+), and must bear National Park Service (NPS) labels containing NPS accession and catalog numbers.

Designated Repositories

The museum collections from Big Cypress National Preserve (BICY), Biscayne National Park (BISC), Dry Tortugas National Park (DRTO) and Everglades National Park (EVER) are located at the South Florida Collection Management Center (SFCMC) at Everglades National Park. In general, the SFCMC is the preferred repository for specimens collected from the four South Florida parks. Use of a single repository simplifies collection management and accountability of collections while enabling researchers to access more park specimens at a single location. All four South Florida parks have designated the Southeast Archaeological Center (SEAC) in Tallahassee, FL as their primary repository for archaeological collections.

There are situations, however, when use of other repositories is appropriate, in furtherance of the National Park Service mission to ensure access and preservation of museum collections. All such repositories must meet NPS standards for the preservation and protection of museum collections. **The proposed repository for specimens collected must be discussed with the Curator's office as part of the permit application process. Anticipated curation costs beyond cataloging (e.g. specimen preparation techniques and supplies, storage cabinet and supply purchases, conservation, etc.) must also be discussed at that time. See Attachment 1: Required Curation Materials and Supplies for more information.** The National Park Service reserves the right to mandate specific repositories for collections from park property.

Please note that the National Park Service does not loan specimens to individuals—institutional sponsorship is required. All loans of specimens to institutions (for cataloging, research, conservation, exhibit or storage purposes) must be accompanied by the required loan paperwork, approved by the appropriate park Superintendent. The maximum time period for any loan is 10 years; extensions or renewals of loans can be granted.

Receiving an Accession Number:

Call the Curator's office at (305) 242-7826 to obtain an accession number for the collection.

- **Accession numbers are assigned as a condition of receiving a permit.**
- Please have your study number available when you call.
- Be prepared to discuss you project briefly (specimen collection, destructive analysis, associated records, proposed repositories, etc.).
- The accession number will be emailed to you and the Permit Coordinator, along with this document, and appropriate cataloging databases and instructions.
- The park accession number must appear on all reports, field notes and correspondence relating to the collection, and on the label of each specimen collected.

DURING Collecting:

During collection it is essential to gather complete information required for cataloging specimens. **It is highly recommended that you review the fields in the cataloging database prior to collection.** The Museum Catalog Worksheet-NH (Form 10-254D) may be used during field work for documenting pertinent data on-site, thus assuring that the collector

has recorded all pertinent ANCS+-related data. Copies of Form 10-254D may be obtained from the Curator's office.

Per Director's Order #77, the use of longitude/latitude or Universal Transverse Mercator Grid (UTM) coordinates is required in the natural resource specimen catalog record to integrate information into the Geographic Information System (GIS). These data bases allow for efficient and effective use of the collection information for park-related management programs, for determining gaps in research needs, and for helping resource managers make decisions and set priorities, for the following programs:

- Inventory and monitoring
- Environmental compliance
- Fire planning
- Development planning
- Wildlife management
- Vegetation management
- Environmental impact plans
- Resource management plans

AFTER collecting:

Call the Curator's office and obtain a block of catalog numbers for the specimens that will be permanently retained. When you call, please have the following information ready:

- Your accession number.
- Dates collecting began and ended.
- Number of specimens collected (estimates are acceptable for large collections).
- The name of the institution and point of contact where specimens will be cataloged.

The Curator's office will send you (or the individual responsible for cataloging the collection):

- Additional copies of the cataloging database(s), if needed.
- Sample catalog records, if needed.
- At the request of the cataloger, a copy of the Automated National Catalog System (ANCS+) software, to allow direct entry of data, can be sent instead of the export file. ANCS+ is a Windows-based, user-friendly program based on a commercial product called Re:discovery.
- NPS specimen labels and instructions for their completion. If you are using ANCS+, NPS labels can be generated electronically.
- An NPS Outgoing Loan Agreement form, to be signed by the institutional representative responsible for the loan. (All specimens, as well as their derivatives and byproducts, remain the property of the United States).

Integrated Pest Management

The National Park Service does not fumigate museum specimens as a preventive measure. Pests are managed through isolation, monitoring, good housekeeping, eliminating food and beverages, excluding pests and other Integrated Pest Management practices. Do not use

fumigants with NPS collections. If you have concerns or questions about individual specimens, please contact the Museum Curator.

Cataloging

Cataloging of NPS specimens must be done in ANCS+ or by using the export templates to catalog in MS Excel. **Refer to the instructions that accompany the database for additional information on required fields and formats for cataloging NPS specimens.**

Cataloging of specimens to NPS standards is the responsibility of the collector. The cataloging process records the documentary information of the specimen and can serve as an index to additional sources of information. It is the primary property and location record of a natural resource specimen. This information is entered into the NPS Automated National Catalog System (ANCS+), making the information available for future accountability, inventory and research purposes.

NOTE: SPECIMENS THAT ARE TO BE CONSUMED IN THE COURSE OF RESEARCH SHOULD NOT BE CATALOGED.

For standard cataloging procedures, refer to the NPS Museum Handbook, Part II, Chapters 3 and 4, Appendix H, and the ANCS+ User Manual. Electronic copies of these documents are available at www.cr.nps.gov/museum/publications/index.htm

Specimen Labels

As stated in Director's Order #77 (Natural Resources Management Guideline), NPS specimen labels:

- Become a permanent record and identify the specimen as belonging to the NPS irrespective of where it is being stored or used;
- Provide data that are essential to the identification of the specimen and are required for the proper cataloging of the specimen; and
- Must be completed by the collector before cataloging.

Specimen labels are provided by the NPS to park and non-NPS researchers who collect specimens as part of an approved research project. For guidance on standard labeling procedures refer to the NPS Museum Handbook, Part II, Appendix H.

Labels must be printed on archival quality (acid-free) paper or Tyvek using permanent ink. All labels MUST contain the appropriate park accession and catalog numbers in permanent ink, in this format:

Accession Number:
BICY-1234 for Big Cypress National Preserve
BISC-1234 for Biscayne National Park
DRTO-1234 for Dry Tortugas National Park
EVER-1234 for Everglades National Park

Catalog Number:
BICY 999999 for Big Cypress National Preserve
BISC 999999 for Biscayne National Park
DRTO 999999 for Dry Tortugas National Park
EVER 999999 for Everglades National Park

Note that the hyphen is necessary to distinguish the accession number from the catalog number. Do not use hyphens in the catalog number.

- The accession number MUST appear on all reports, correspondence and original field records pertaining to the collection.
- Catalog numbers should be cited in your final report when referencing individual specimens.

AFTER Cataloging

Within one year of the final date of collecting, you must submit:

- Any specimens that are to be permanently retained, along with your labels and project documentation, to the repository in which they are to be curated. If the approved repository is not the SFCMC, you must provide the Curator's office with confirmation that specimens and associated documentation have been deposited.
- An electronic copy of your catalog records (either in ANCS+ or the appropriate export file) to the Curator's office.

- Copies of all of your field records (notes, maps, recordings, etc.) to the Permit Coordinator's office. Please copy notes, maps and other written or printed matter onto acid-free paper. This requirement is a safeguard, in case original materials are accidentally destroyed or lost in the future. **Original field records must be retained permanently in association with the collection.**

If you find that you will have trouble meeting this deadline, call or write the Curator at the address below to make other arrangements.

Material Transfer Agreements

All specimens (including anything derived from such material) removed from BICY, BISC, DRTO or EVER remains federal property. If you wish to send specimens (or their progeny or derivatives) to a colleague outside your own laboratory for further analysis, your colleague must complete a Material Transfer Agreement with the appropriate park and may also be required to apply for a Scientific Research and Collecting Permit. **No materials can be transferred until the appropriate paperwork has been completed.** For assistance with specimen transfers, please contact the Research Permit Office at the appropriate park.

Contact Information

Please contact the Curator's office at any time during this process with any questions that may arise. We are here to help you comply with the terms of your permit and to make compliance as easy as possible, under current regulations.

Nancy Russell, Museum Curator
South Florida Collections Management Center

Everglades National Park

40001 State Road 9336

Homestead, FL 33034

(305) 242-7826

(305) 242-7836 fax

e-mail Nancy_Russell@nps.gov

The Curator's office is located in the Daniel Beard Center, Everglades National Park.

Attachment 1: Required Curation Materials and Supplies

General Supplies

Acid-free paper—a 25% rag paper with a pH of approximately 7.0; free of acid, lignin, alum and sulfur.

Calipers

Pencil—"H" or #2 hardness graphite lead pencil.

Permanent black ink—fade resistant, indelible ink. Acceptable inks are Higgins®, Black Magic® and Pelikan 17 Black. (Note: Sharpies® are not archival).

Pigma pen—permanent black ink pen.

Polyethylene Ziplock™ or similar bags—avoid bags developed for food storage and home use because of printing inks and dyes.

Tape measure, cloth—metric and SAE.

Safety Supplies

Neoprene gloves—heavier synthetic gloves for handling fluid preserved specimens as they are resistant to alcohol and formaldehyde.

Nitrile gloves—synthetic rubber gloves for handling natural history specimens that may have been treated with poisonous chemicals.

Respirator—it is the collector's responsibility to be medically evaluated for respirator use, be fit tested, use appropriate cartridge filters for the activity and be trained in its proper use.

Archives (Project Documentation)

Archival file folders—acid-free, lignin-free, buffered folders, letter or legal size.

Archival map folders—large, heavy stock buffered folders.

- Do not use buffered folders for blueprints or photographs unless first placed inside a sleeve of unbuffered paper or Mylar® as a barrier.

Archival document storage box—made of buffered board and for use with documents placed inside archival file folders; letter or legal size.

Archival record storage box—buffered corrugated fiberboard box with separate telescoping lid used to store documents placed inside archival file folders, for projects with larger quantities of associated field records.

Archival photo enclosures

- All materials used to house photographic images must have passed the Photographic Activity Test (PAT).
- Polyethylene photo pages may be used—do no use yellowed polyethylene pages as they may be contaminated with damaging chemicals. Never use PVC photographic pages.
- Alkaline buffered paper enclosures may be used for black-and-white cellulose ester film.
- Use only unbuffered materials for color images (prints, negatives, transparencies and slides).
- Due to the humidity control issues, do not use Polyester (Mylar®) envelopes for photographs.

Entomology Specimens

Stainless steel pins for mounting insects

Insect pinning trays—constructed of 0.5" thick cardboard and covered with acid-free white chrome paper. On the inside bottom is a rigid polyethylene foam liner to mount the pinned insects.

Entomology cabinet—51-5/8"H x 21-3/4"W x 22-3/4" D or 84"H x 23"W x 20-7/16" D steel cabinets with a gasket and locking door.

Aluminum Cornell type entomology drawers

NPS entomology specimen labels

For insects preserved in fluids, see Wet Collections below.

Plant Specimens

Herbarium specimens should be glued, taped or sewn (or a combination approach) onto the mounting sheets as appropriate for the specimen to ensure that they are adequately mounted.

Note: specimens must be mounted when submitted to the SFCMC. Researchers may do this themselves (using approved materials and techniques) or they may have Fairchild Tropic Botanical Gardens or another herbarium mount the specimens for them. **The researcher is responsible for the cost of mounting**. For reference and budget planning purposes, Fairchild charges $774 per 100 sheets for mounting.

Herbarium mounting sheets—an 11.5"W x 16.5"L sheet of white, acid-free and buffered paper stock.

Herbarium adhesive—methylcellulose.

Herbarium mounting tape—a white cloth tape with water-activated adhesive.

Herbarium folder—a folder measuring 16-5/8" L x 12" W (when folded), made of acid-free and buffered heavy-stock paper.

Herbarium fragment folder—an acid-free and buffered paper enclosure.

Herbarium cabinet—40"H x 29-1/8"W x 19-1/8"D or 84-1/8"H x 29-18"W x 19-1/8" D steel single-door cabinet with gasket and locking door.

NPS herbarium specimen labels

For plants preserved in fluids, see Wet Collections below.

Mammal Collections

Specimen trays—made from buffered, acid-free board.

- Contact with buffered paper can damage pigments in bird and mammal specimens. Line buffered trays with polyethylene sheeting to block direct migration of alkalis to these specimens.

Wet Collections

Evaporation of preservatives from fluid specimens endangers specimen preservation, increases collection management responsibilities, creates an increased fire hazard in museum storage and threatens the health and safety of curatorial staff. To ensure that all park specimens are appropriately preserved without creating future management problems, **all wet specimens must be submitted in approved containers with approved closures**, as listed below.

- Containers must be screw-top, clear flint glass jars with polyethylene insert and a flexible polypropylene lid. Wide-mouthed jars are preferred.
- Containers should be filled to the neck with the preservative fluid. This reduces the air-to-fluid ratio in the container and allows for immediate detection of evaporative loss of fluid because all containers are filled to a standard height.
- Specimens should not be allowed to protrude above the level of the fluid in the container. Use the largest jar size necessary to ensure that this does not occur.

Jars should be appropriately sized to the specimens they contain. Multiple specimens of the *same species* may be stored within one jar if:

- Each specimen is individually tagged with the park catalog number.
- Tags, ink and string are chemically resistant.
- An inventory of the specimens is included in each jar.

The fluid preservative used is necessitated by the specimens collected. In general, 70% ethanol (ethyl alcohol) is the preferred preservative. However, 10% buffered formalin is currently the preservative of choice for eggs and larvae of fishes and amphibians. Formalin is also commonly used as a fixative for many types of specimens. **In all cases, the chemicals used for fixation and storage must be documented for each specimen**. It is important to record all fixation and preservation chemicals, processes and exposure times because these may affect future use of the specimen, especially for molecular studies.

General information about fluid preservatives is presented below. Additional questions should be addressed to the Curator's office.

- Alcohol should be diluted with distilled, purified or deionized water to avoid the formation of precipitates.
- Formaldehyde is not considered a good long-term preservative for most specimens. In addition, it represents significant health and safety issues for collectors, researchers and staff. Use of formaldehyde or formalin should be limited only to those situations when it is required for the preservation of the specimen and ethanol is inappropriate.
- Isopropanol is used as a preservative at concentrations of 45-50%. At this strength it has been shown to cause considerable shrinkage of specimens. Use of isopropanol as a fluid preservative must be justified and approved by the Curator's office in advance.
- For fish, it has been recommended that specimens fixed at 10% formalin be transferred to 35%, then to 55% and then to the 70% concentration of ethanol storage solution.

- Methanol is not a good preservative and must not be used.
- Phenols are not good long-term (i.e. greater than 10 years) preservatives and must not be used.
- There are no published reports on the long-term effectiveness of ethylene glycol as either a preservative or an additive and it must not be used.
- Fungal activity is a problem with glycerol solutions and they must not be used.
- **It is the responsibility of the collector to know the hazards associated with fluid preservatives and to ensure safe handling procedures during preparation and transportation of specimens**.

A list of vendors for curatorial products is available upon request from the Curator's office.

APPENDIX F

SCIENTIFIC RESEARCH AND COLLECTING PERMIT [illegible] United States Department of the Interior National Park Service Biscayne NP	**Study#: BISC-10015** **Permit#: BISC-2010-SCI-0036** **Start Date: Apr 29, 2010** **Expiration Date: May 06, 2012** **Coop Agreement#: n/a** **Optional Park Code: n/a**

Name of principal investigator:

Name: Bahram Charkhian **Phone:** 561-682-2284 **Email:** n/a

Name of institution represented:

South Florida Water Management District

Co-Investigators:

Name: Argemiro Celis	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: BNK Environemntal	**Phone:** 561-682-2786	**Email:** contractor- Water level
Name: Damaso Rosales	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Elvie Ebanks	**Phone:** 561-682-2786	**Email:** Coordinate installation of water level
Name: Forrest shaw	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Galia Varona	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Gwen Burzycki	**Phone:** 305-372-6854	**Email:** Miami-DERM vegetation monitoring
Name: Helena Giannini	**Phone:** 305-372-6854	**Email:** Miami-DERM vegetation monitoring
Name: India Pascullis	**Phone:** 305-372-6854	**Email:** Miami-DERM vegetation monitoring
Name: Jonathan Sidner	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Kate Wilson	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Maurice Pierre	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Rebecca Ross	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Santiago Acevedo	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection
Name: Sheri Kempinski	**Phone:** 305-372-6854	**Email:** Miami-DERM data collection

Project title:

Biscayne Bay

Coastal Wetland Project - Ecological Monitoring Plan for L-31E Project

Purpose of study:

In order to satisfy the Department of the Army 404 permit for L-31 E, Biscayne Bay Coastal Wetland Project (Permit # SAJ-1994-1327{IP-TKW}), the District is requesting a scientific permit from Biscayne National Park to access approximately 100 meters (one acre) downstream of Culvert 3 (S-23D, Latitude 252837 and Longitude 802048) to install a staff gauge and initiate ecological data collection (baseline and routine monitoring). The monitoring stations described in this document were established to satisfy requirements of the CERP PIR and to satisfy the anticipated requirements of Department of the Army 404 permit #SAJ-1994-1327[IP-TKW]. Ecological monitoring of the L-31 E Project will involve two separate phases as specified in the Department of the Army 404 permit no: SAJ-1994-1327[IP-TKW]. The two monitoring phases will consist of the following:

A- Performing a time-zero monitoring event at two of the four culvert locations including the area anticipated to be enhanced by water deliveries within 60 days of completion of culvert installation (one event before construction of culvert).

B- Performing annual monitoring at two of the four culvert locations for a period of no less than three (3) years after completion of the Project.

Recommended by park staff(name and title):

[signature]

Approved by park official:

Myra I. Palfrey, Asst. Supt.

Title:

Superintendent

Reviewed by Collections Manager:

Yes X No ___

Date Approved:

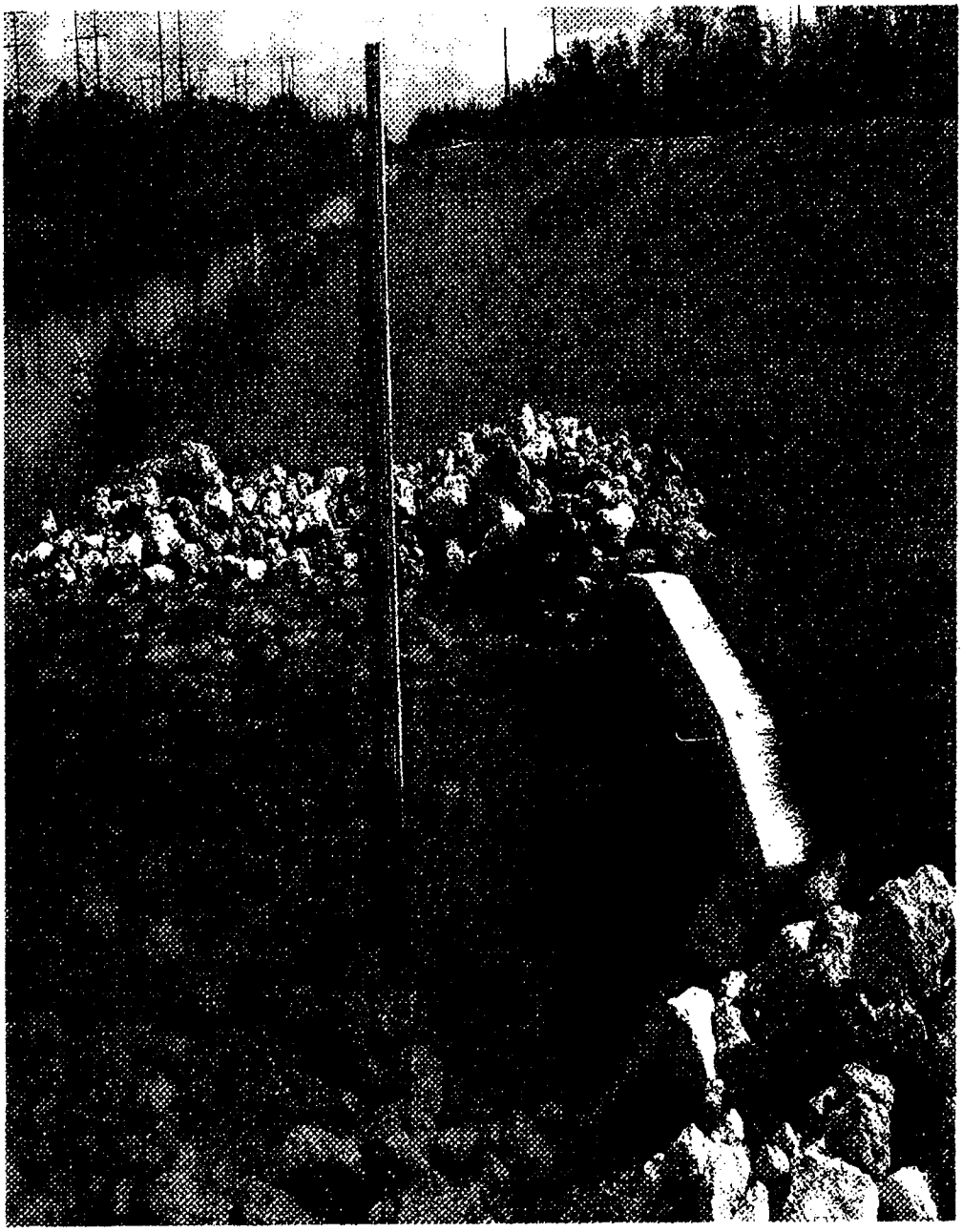
5-25-10

I Agree To All Conditions And Restrictions Of this Permit As Specified
(Not valid unless signed and dated by the principal investigator)

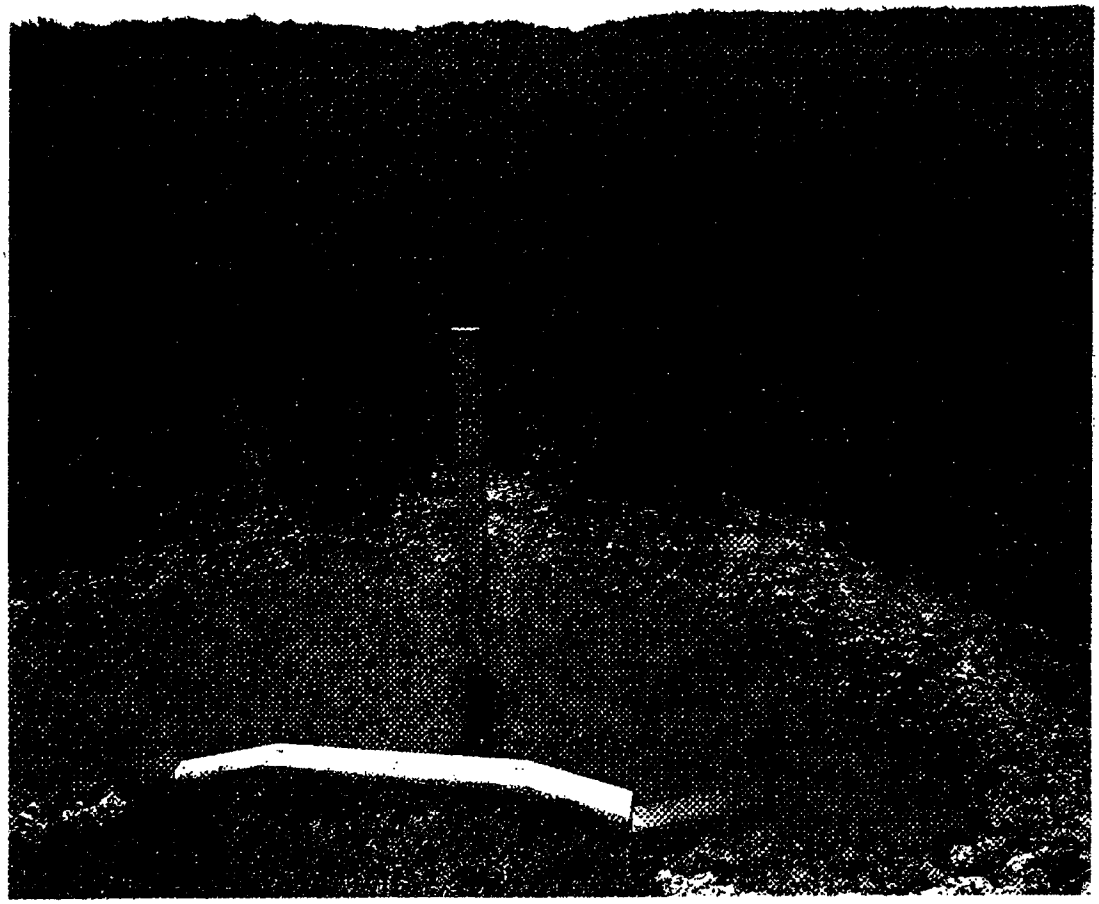
[signature] 5/25/2010

(Principal investigator's signature) (Date)

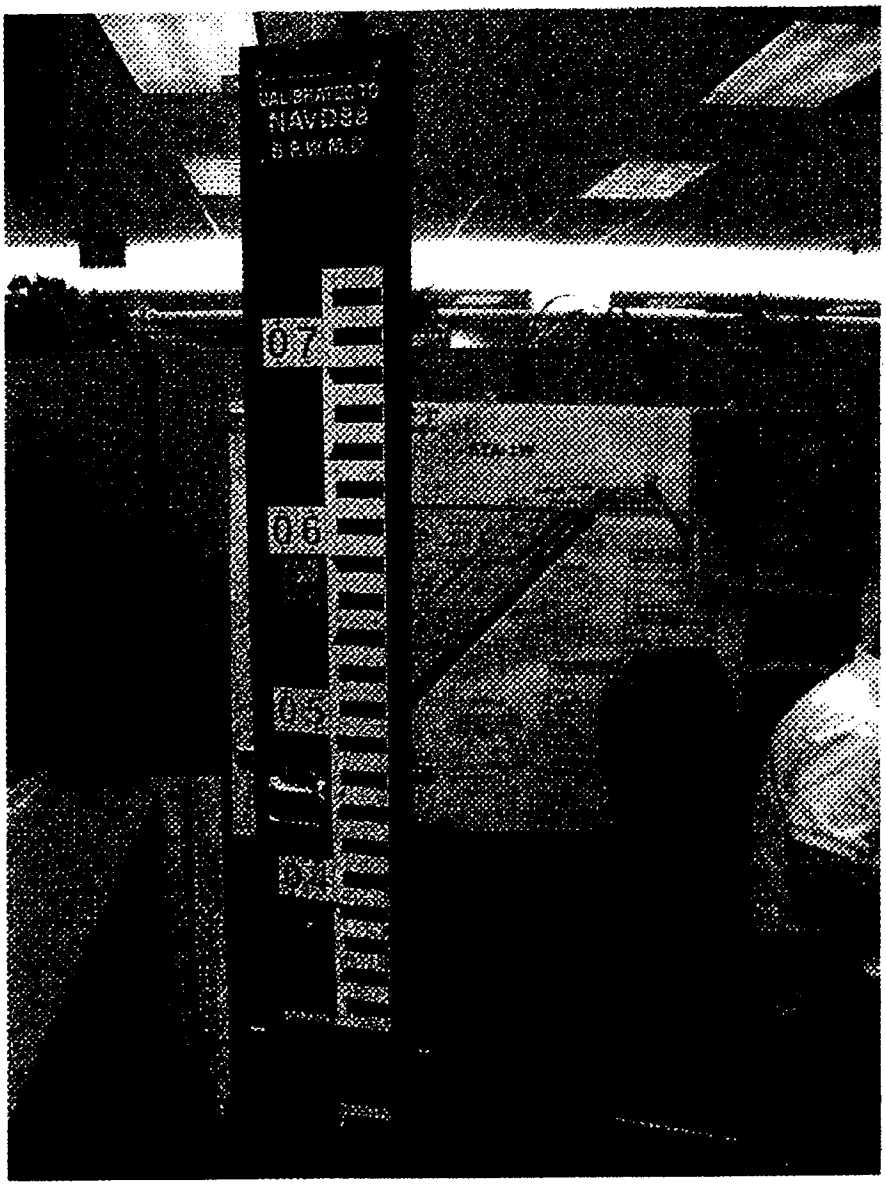
THIS PERMIT AND ATTACHED CONDITIONS AND RESTRICTIONS MUST BE CARRIED AT ALL TIMES WHILE CONDUCTING RESEARCH ACTIVITIES IN THE DESIGNATED PARK(S)



Location of Staff Gauge upstream of Culvert



Location of Staff Gauge downstream of Culvert



Picture of a New Staff Gauge (will be installed at 100 meters downstream of culverts S-23A & S-23D)

EXHIBIT "B"

PAYMENT AND DELIVERABLES SCHEDULE

The **County** hereby agrees to provide the **District** with all deliverables. Acceptability of all work shall be based on the judgment of the **District** that the work is technically credible, accurate, precise and timely.

The **County** is responsible for reviewing and approving deliverables from the contractor to ensure that project requirements are met. The **County** is also responsible for project management, budget management and quality control.

The **County** hereby shall submit invoices in the **listed in the schedule below (Table 5).** All invoices shall list the deliverables submitted to the **District** as set forth under tasks 4 through 9 of this Agreement. Any failure to meet the **District's** acceptance criteria shall result in a refusal payment or a reduction of the quarterly payment that does not meet tasks that specified in sections 4 through 9 of SOW.

The **District** shall review and forward, within fifteen (15) working days of receipt, recommended revisions (letter format) to each report for incorporation by the **County**. The **District** shall be responsible for aspects of managing and completing project as described in EXHIBIT "A".

Payment of invoices shall be contingent upon delivery and acceptance by the District of all deliverables and work products due within the invoiced period. The **County** shall submit invoices in the not-to-exceed amounts listed below. All invoices shall list the deliverables submitted to the **District** as set forth under tasks 4 through 9 of this Agreement. Any failure to meet the **District's** acceptance criteria shall result in a refusal payment or a reduction of the quarterly payment that does not meet tasks that specified in sections 4 through 9 of SOW.

The total payment by the **District** for all work completed herein shall not exceed the amount of **$7,509.39** for FY01 and **$19,488** for FY11 this Agreement.

The **County** hereby agrees to provide the **District** with all deliverables. Acceptability of all work shall be based on the judgment of the **District** that the work is technically credible, accurate, precise and timely.

The **District** shall review and forward, within fifteen (15) working days of receipt, recommended revisions (letter format) to each report for incorporation by the **District**. The **County** shall be responsible for aspects of managing and completing project as described in EXHIBIT "A".

Table 5- PAYMENT AND DELIVERABLES SCHEDULE

Deliverable	Due Date*	SFWMD ** Not-to-Exceed Payment	Total Cost
Data Collection & Analysis and report baseline report	7/26/2010	$2,637.39	$2,637.39
Data Collection & Analysis and report second quarter July and August 2010	8/23/2010	$3,248	$3,248
Data Collection & Analysis and report September 2010	9/22/2010	$1,624	$1,624
FY10 - Total		$7,509.39	$7,509.39
Data Collection & Analysis and report 1st QTR	12/20/2010	$4,872	$4,872
Data Collection & Analysis and report 2nd QTR	3/28/2011	$4,872	$4,872
Data Collection & Analysis and report third QTR	6/27/2011	$4,872	$4,872
Data Collection & Analysis and report forth QTR	9/26/2011	$4,872	$4,872
FY11 - Total		$19,488	$19,488

* All dates are referenced from the date of execution of this agreement.

** The **District** shall only be obligated to pay for documented actual expenditures within the not-to-exceed amounts specified above. In the event actual expenditures by the **County** are less than the not-to-exceed for a particular task, the **County** shall have the right to apply the unexpended balance towards a subsequent task. The **County** shall provide written notice of its decision to exercise this right. In no event shall the **District**'s total obligation exceed **$7,509.39(FY10) and $19,488 (FY11)** as specified in Table 5. The **County** is responsible for any additional funds.

If the total consideration for this Agreement is subject to multi-year funding allocations, funding for each applicable fiscal year of this Agreement will be subject to Governing Board budgetary appropriation. In the event the **District** does not approve funding for any subsequent fiscal year, this Agreement shall terminate upon expenditure of the current funding, notwithstanding other provisions in this Agreement to the contrary.